

**Table S1. Developmental defects in zebrafish embryos after Pi4ka downregulation**

Defect	% of injected embryos at 48 hpf	
	MO3 (n=265)	MO1 (n=328)
Small heads	96	52
Doomed head	58	ND
Small eyes	95	52
Decreased retinal pigmentation	82	ND
Hooked tails	76	36
Shorter body axis	95	67
Pericardial edema	66	36
Loss of pectoral fin (72 hpf)	91	47

ND, not scored.